Agency for Healthcare Research and Quality
Advancing Excellence in Health Care

NATIONAL GUIDELINE CLEARINGHOUSE

General

Guideline Title

Best evidence statement (BESt). Providing most effective child life care for patients having general anesthesia.

Bibliographic Source(s)

Cincinnati Children's Hospital Medical Center. Best evidence statement (BESt). Providing most effective child life care for patients having general anesthesia. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; 2013 Aug 13. 5 p. [7 references]

Guideline Status

This is the current release of the guideline.

Recommendations

Major Recommendations

The strength of the recommendation (strongly recommended, recommended, or no recommendation) and the quality of the evidence (1aâ€'5b) are defined at the end of the "Major Recommendations" field.

It is recommended that children receiving general anesthesia in a medical facility be provided with coping strategies to decrease maladaptive behaviors post-operatively (Gorayeb et al., 2009 [2b]; Zastowny, Kirschenbaum, & Meng, 1986 [2b]).

Notes: Studies also showed a decrease in a child's anxiety when provided with coping strategies pre-operatively (Farrell et al., 2013 [2a]; Li, Lopez, & Lee, 2007 [2a]; Kain et al., 1998 [2a]; Gorayeb et al., 2009 [2b]; Zastowny, Kirschenbaum, & Meng, 1986 [2b]; Brewer et al., 2006 [3a]). Additionally, studies showed an increase in child cooperation with the use of coping strategies (Farrell et al., 2013 [2a], Zastowny, Kirschenbaum, & Meng, 1986 [2b]).

Definitions:

Table of Evidence Levels

Quality Level	Definition
1a† or 1b†	Systematic review, meta-analysis, or meta-synthesis of multiple studies
2a or 2b	Best study design for domain
3a or 3b	Fair study design for domain

Quality Level	Definition
4a or 4b	Weak study design for domain
5a or 5b	General review, expert opinion, case report, consensus report, or guideline
5	Local Consensus

†a = good quality study; b = lesser quality study

Table of Language and Definitions for Recommendation Strength

Language for Strength	Definition
It is strongly recommended that… It is strongly recommended that… not…	When the dimensions for judging the strength of the evidence are applied, there is high support that benefits clearly outweigh risks and burdens (or vice versa for negative recommendations).
It is recommended that… It is recommended that… not…	When the dimensions for judging the strength of the evidence are applied, there is moderate support that benefits are closely balanced with risks and burdens.
There is insufficient evidence and a lack of consensus to make a recommendation…	

Note: See the original guideline document for the dimensions used for judging the strength of the recommendation.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Any disease or condition requiring surgery with general anesthesia

Guideline Category

Counseling

Management

Clinical Specialty

Anesthesiology

Family Practice

Nursing

Pediatrics

Psychology

Surgery

Intended Users

Advanced Practice Nurses

Allied Health Personnel

Hospitals

Nurses

Physician Assistants

Physicians

Psychologists/Non-physician Behavioral Health Clinicians

Social Workers

Guideline Objective(s)

To evaluate, among children undergoing general anesthesia, if providing coping strategies to patients versus verbal preparation only decreases maladaptive behavior post-operatively as reported by parents

Target Population

Children ages 2 to 12 years having general anesthesia within a medical facility

Interventions and Practices Considered

Providing coping strategies to patients pre-operatively

Major Outcomes Considered

- Decreased maladaptive behavior post-operatively
- Child anxiety post-intervention and post-operatively
- Increased child cooperation

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Search Strategy

- Databases: PsycINFO, MEDLINE, CINAHL, Google Scholar, hand searched references of relevant articles
- Search Terms: Surgery, maladaptive behaviors, preoperative anxiety, coping skills, coping, postoperative period, pediatric surgery, therapeutic play, endoscopy
- Limits, Filters, Search Dates: English. Limited to articles from 1980 to 2013.
- Date Last Search Done: April 16, 2013.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Table of Evidence Levels

Quality Level	Definition
1a† or 1b†	Systematic review, meta-analysis, or meta-synthesis of multiple studies
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4a or 4b	Weak study design for domain
5a or 5b	General review, expert opinion, case report, consensus report, or guideline
5	Local Consensus

†a = good quality study; b = lesser quality study

Methods Used to Analyze the Evidence

Systematic Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Not stated

Rating Scheme for the Strength of the Recommendations

Table of Language and Definitions for Recommendation Strength

Language for Strength	Definition
It is strongly recommended that… It is strongly recommended that… not…	When the dimensions for judging the strength of the evidence are applied, there is high support that benefits clearly outweigh risks and burdens (or vice versa for negative recommendations).
It is recommended that… It is recommended that… not…	When the dimensions for judging the strength of the evidence are applied, there is moderate support that benefits are closely balanced with risks and burdens.
There is insufficient evidence and a lack of consensus to make a recommendation…	

Note: See the original guideline document for the dimensions used for judging the strength of the recommendation.

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Peer Review

Description of Method of Guideline Validation

This Best Evidence Statement (BESt) has been reviewed against quality criteria by two independent reviewers from the Cincinnati Children's Hospital Medical Center (CCHMC) Evidence Collaboration.

Evidence Supporting the Recommendations

References Supporting the Recommendations

Brewer S, Gleditsch SL, Syblik D, Tietjens ME, Vacik HW. Pediatric anxiety: child life intervention in day surgery. J Pediatr Nurs. 2006 Feb;21(1):13-22. PubMed

Farrell MA, Parrish K, Ziemer K, Scarlett WG, Parker S, Martin KJ, Ahmed MI. The effects of child life intervention on reducing pediatric patients' anxiety and increasing cooperation in perioperative settings. Child Life Focus. 2013;31(2):1-8.

Gorayeb RP, Petean EB, de Oliveira Pileggi F, Tazima Mde F, Vicente YA, Gorayeb R. Importance of psychological intervention for the recovery of children submitted to elective surgery. J Pediatr Surg. 2009 Jul;44(7):1390-5. PubMed

Kain ZN, Caramico LA, Mayes LC, Genevro JL, Bornstein MH, Hofstadter MB. Preoperative preparation programs in children: a comparative examination. Anesth Analg. 1998 Dec;87(6):1249-55. PubMed

Li HC, Lopez V, Lee TL. Psychoeducational preparation of children for surgery: the importance of parental involvement. Patient Educ Couns. 2007 Jan;65(1):34-41. PubMed

Zastowny TR, Kirschenbaum DS, Meng AL. Coping skills training for children: effects on distress before, during, and after hospitalization for surgery. Health Psychol. 1986;5(3):231-47. PubMed

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Improved child coping strategies during general anesthesia may result in lower anxiety (family and child), reduced post-operative maladaptive behaviors, and increased cooperation.

Potential Harms

Not stated

Qualifying Statements

Qualifying Statements

This Best Evidence Statement addresses only key points of care for the target population; it is not intended to be a comprehensive practice guideline. These recommendations result from review of literature and practices current at the time of their formulation. This Best Evidence Statement does not preclude using care modalities proven efficacious in studies published subsequent to the current revision of this document. This document is not intended to impose standards of care preventing selective variances from the recommendations to meet the specific and unique requirements of individual patients. Adherence to this Statement is voluntary. The clinician in light of the individual circumstances presented by the patient must make the ultimate judgment regarding the priority of any specific procedure.

Implementation of the Guideline

Description of Implementation Strategy

Applicability Issues

Timing is often a potential concern as so much information needs to be communicated to the child and family before a child receives general anesthesia. All of the studies offered interventions that were 20 minutes or longer. Some of the research associated with better behavior outcomes, offered preparation and coping strategies prior to the day of surgery showed patients had less anxiety before induction after receiving coping strategies the day of receiving anesthesia.

Staff availability can also be a concern. If there are not currently resources in place for providing coping strategies, acquiring appropriate staff may be a necessary step. When possible, child life specialists should offer interventions/coping strategies as these healthcare professionals have received extensive training in child development and are not responsible for providing any medical care, thus making them a non-threatening member of a hospitalized child's healthcare team. Other disciplines such as nurses, and psychologists offered coping strategies in the literature as well as child life specialists.

Implementation Tools

Audit Criteria/Indicators

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2013 Aug 13

Guideline Developer(s)

Cincinnati Children's Hospital Medical Center - Hospital/Medical Center

Source(s) of Funding

Cincinnati Children's Hospital Medical Center

No external funding was received for development of this Best Evidence Statement.

Guideline Committee

Not stated

Composition of Group That Authored the Guideline

Team Leader/Author: Nikki Gosnell, BS, CCLS; Cincinnati Children's Hospital Medical Center, Child Life and Integrative Care, Same Day Surgery and Vascular Access Team

Support/Consultant: Barbara K. Giambra, PhD(c), MS, RN, CPNP, Evidence-Based Practice Mentor, Center For Professional Excellence, Research and Evidence-Based Practice

Ad Hoc/Content Reviewers: Cathie Marshall, BS, AA, CCLS Clinical Manager, Division of Child Life and Integrative Care

Patient/Family/Parent or Other Parent Organization: Jodi Kelley, Parent of patient in Same Day Surgery

Financial Disclosures/Conflicts of Interest

Conflict of interest declaration forms are filed with the Cincinnati Children's Hospital Medical Center (CCHMC) Evidence-Based Decision Making (EBDM) group. No financial conflicts of interest were found.

Guideline Status

This is the current release of the guideline.

Guideline Availability

Electronic copies: Available from the Cincinnati Children's Hospital Medical Center Web site .

Print copies: For information regarding the full-text guideline, print copies, or evidence-based practice support services contact the Cincinnati Children's Hospital Medical Center Health James M. Anderson Center for Health Systems Excellence at EBDMInfo@cchmc.org.

Availability of Companion Documents

The following are available:

- Judging the strength of a recommendation. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; 2009 May 7. 1 p. Available from the Cincinnati Children's Hospital Medical Center (CCHMC) Web site .
- Grading a body of evidence to answer a clinical question. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; 2009 May 7. 1 p. Available from the CCHMC Web site .
- Table of evidence levels. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; 2009 May 7. 1 p. Available from the CCHMC Web site .

Print copies: For information regarding the full-text guideline, print copies, or evidence-based practice support services contact the Cincinnati Children's Hospital Medical Center Health James M. Anderson Center for Health Systems Excellence at EBDMInfo@cchmc.org.

In addition, suggested process or outcome measures are available in the original guideline document .

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI Institute on January 20, 2014.

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